



# Beautiful Studio Lens Adapted to HD DSLR for Under \$100

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## PARTS:

- [Reverse Mount Adapter. These are brand specific to your DSLR. \(1\)](#)
- [28mm f2.8 lens \(1\)](#)  
*[A lens to reverse-mount. Preferably a wide lens with a big aperture.](#)*
- [Macro extension tube \(1\)](#)  
*[Keeps glare out of the gap between lenses. These are brand specific to your DSLR.](#)*
- [Panasonic WV-LZ15/12 10.6-126mm f1.6 lens \(1\)](#)  
*[This is the lens I used.](#)*
- [Flatbed Scanner rails \(1\)](#)  
*[Cheap 'n true. Use these or something comparable for the rail system.](#)*
- [Nikon D7000 \(1\)](#)  
*[Or a different DSLR. I like mine because it also shoots HD video.](#)*

## SUMMARY

Many older lenses can't simply be attached to DSLRs like my D7000 because the [flange focal distance](#) (lens mount to the focused image) is too short. DSLRs have a mirror, which gets in the way and makes the FFD almost 3 times as long.

My solution is to attach another lens to focus on where the sensor would be for the primary lens. To minimize length, I turned the secondary lens into a macro (close-focusing) lens by [mounting it backwards](#).

My friend [Matti](#) and I made a rail system to hold the camera and lens with his laser cutter. Special thanks to [Station House Studios](#) for lending me the lens that inspired me to make this adapter.

### Step 1 — Beautiful Studio Lens Adapted to HD DSLR for Under \$100



- Acquire parts!
- I found my macro lens on eBay cheap. The shorter the focal length and larger the aperture, the better.

## Step 2



- Attach your secondary lens to your DSLR using the reverse-mount adapter. Then attach the macro extension tube to the other end of that lens.
- Cut out boxes for rail system. We made one that mounts to the camera, one to the tripod, and the other has a support for the TV lens. These are our [design files](#). Remember that they will need to be modified to fit the diameter of your rails.

## Step 3



- Align the lens. I used a meter stick, which is convenient because the minimum focal distance for this lens is 1 meter. Put an object at the end of the ruler, set to focus to 1 meter, and get it as sharp as you can. Preferably, your object will have text or something distinguishable.
- Note: On the D7000, you can "zoom" in Live View. This will help you see if the image is in focus or not.

## Step 4



- Go shoot! This lens has amazing zoom range, macro focusing, and a ginormous aperture. That all makes for some interesting photography. These are some shots I did of (what's left of) fall around here.
- The other great thing about having this lens on my D7000 is that I can shoot video!

Will attach design documents soon!

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